**Results for sacB assay.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Experimental Condition** | **initial OD 600 Readings** | **OD 600 Readings after 2hr** | | **Averaged value** | **S.t.d** | **Normalized Value** | **S.t.d** |
| Sample no |  | 1 | 2 |  |  |  |  |
| Control | 0.15 | 0.149 | 0.158 | 0.154 | 0.00636 | 1.000 | 0.0415 |
| sacB+1%Fru | 0.14 | 0.153 | 0.175 | 0.164 | 0.01556 | 1.068 | 0.1013 |
| sacB+5%Fru | 0.14 | 0.157 | 0.151 | 0.154 | 0.00424 | 1.003 | 0.0276 |
| sacB+10%Fru | 0.14 | 0.118 | 0.126 | 0.122 | 0.00566 | 0.795 | 0.0369 |
| sacB+1%Glu | 0.14 | 0.173 | 0.187 | 0.180 | 0.00990 | 1.173 | 0.0645 |
| sacB+5%Glu | 0.14 | 0.182 | 0.179 | 0.181 | 0.00212 | 1.176 | 0.0138 |
| sacB+10%Glu | 0.14 | 0.132 | 0.147 | 0.140 | 0.01061 | 0.909 | 0.0691 |

**Table 1. OD600 readings collected for the cell growth/sacB assay.** Cells are first grown to about 0.3 OD600 in fresh liquid culture, then 1 mL of each culture is transferred into an Eppendorf tube, centrifuged and the pellet is collected and then re-suspended in each treatment solution**.** Control is made by pellet collected from 1 ml sacB liquid culture re-suspended in 1ml miliQ water. Other samples are re-suspended in sugar solutions of different concentration as noted. After adding treatment solutions, OD 600 is collected from another extra duplicate.

**Figure 1. Normalized OD 600 Readings of sacB-transformed culture w/ and w/o addition of Sugar after 2 Hours.** Error bars represent standard deviation calculated based on duplicates. As we can see, high fructose concentration inhibits bacterial growth by at least 20 percent and the fructose is more effective than glucose. We need to note that the observed 20% inhibition is a minimal estimation because in the control, no nutrients is added while in the other samples sugars are added.

**Figure 2. Change in OD 600 Reading over 2 hours.** We can see more clearly from the trends that 10% fructose has the most significant effect on inhibition of growth. It would be ideal if we have time to do more trials and determine the accumulation of levan.